

COLOR MANAGEMENT SYSTEMS AND METHODS
WITH IMPROVED COLOR MATCHING TECHNIQUES

ABSTRACT OF THE DISCLOSURE

- 5 The invention is directed to color management techniques which use sample identifiers that define sample color areas having core areas and buffer areas adjacent the core areas. The core area defined by each sample identifier includes a unique set of colors. However, the buffer area defined by each sample identifier is a same common color (e.g., white). Sample color areas can be displayed or outputted (e.g., printed)
- 10 adjacent to each other to form a region of sample color areas (e.g., a color image, a uniform region of color, etc.). Within such an arrangement, the buffer areas limit any ink bleed between the core areas of the sample color areas thus minimizing, or altogether avoiding, spectral interaction between inks of different core areas. This enables greater color control and consistency, as well as providing a large color gamut.
- 15 One arrangement of the invention is directed to a technique for matching a target color with a sample color. The technique involves generating a target identifier that identifies the target color in a device independent color space, and providing a set of color space distances based on (i) the target identifier and (ii) a set of sample identifiers that identifies a set of sample colors in the device independent color space. Each sample
- 20 identifier defines a sample color area having a core area and a buffer area adjacent the core area. The core area of the sample color area defined by each sample identifier includes a unique set of colors. Additionally, the buffer area of the sample color area defined by each sample identifier is a same common color. The technique further involves selecting, from the set of sample identifiers, a particular sample identifier that
- 25 identifies a particular sample color based on the set of color space distances, in order to match the target color with the particular sample color. The buffer areas limit spectral interaction between inks of the core areas allowing greater color control and consistency.